STATISTICAL BULLETIN
Metropolitan Life Insurance Co.

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FORTY-SEVEN MILLIONS DISBURSED IN DEATH CLAIMS ON ACCOUNT OF PRINCIPAL DISEASES AND CONDITIONS DURING 1920.

Nearly forty-seven million dollars were disbursed by the Metropolitan Life Insurance Company in 1920 in the payment of death claims. Over three-quarters of this amount was paid on account of deaths from ten causes which are largely preventable or postponable. The interest of life insurance companies in measures directed toward the control of these diseases is obvious.

More money was disbursed on account of tuberculosis than for any other disease. Despite the fact that the death rate for tuberculous diseases in 1920 was the lowest in the history of the Company, and was two-fifths below that of 1911, more than six and one-half millions were paid for death claims resulting from tuberculosis. There is still much room for extension of the educational campaign which has been carried on for years to show the importance of personal hygiene, of early recognition of incipient cases and of the fresh air method of treatment.

Pneumonia ranks second in importance in amount paid for death claims. The sum was more than five million dollars. Many of these pneumonia deaths were due, primarily, to influenza which continued to be, on its own account, one of the principal causes of death; it was responsible for the disbursement of well over three million dollars. One dollar of every fifteen disbursed was paid on account of deaths definitely reported as due to influenza. The total for influenza and pneumonia combined is even higher than for tuberculosis. The amount was more than eight and one-quarter millions of dollars.

Over five million dollars were paid on account of organic heart disease. There is a promising field for public health work in the dissemination of information to cardiac patients on personal hygiene. Many of these deaths could readily be postponed.

Over three and one-half millions were paid in the settlement of death claims for cancer. One death in every eight of women and one in every fourteen of men over the age of forty years is from cancer. There is much to justify a more intensive effort on the part of communities to disseminate knowledge concerning the early symptoms and treatment of the disease.

The amount disbursed on account of the various diseases and conditions arising from pregnancy and child-birth was nearly one million dollars. It is evident that still greater efforts are called for in such directions as the education of pregnant women in hygiene, the supervision of midwifery, and even more than these, the extension of prenatal and post-partum nursing care.

Bright's disease and cerebral hemorrhage were other important factors in the Company's mortality experience for which, together, about six million dollars were disbursed. Deaths from these diseases are, in the great majority of cases, those of older persons; nevertheless many of them are postponable, especially, those from Bright's disease.

There were disbursements of nearly four and one-half millions of dollars on account of deaths from violence. This is in spite of the fact that the death rates for suicides, homicides and accidents were lower than have obtained for many years. These rates are still needlessly high in the United States.

These figures bring home strikingly the economic value of human life. They show how great are the losses from conditions which are, to a great extent, preventable. But the losses suffered by communities are far greater than those of the insurance companies. The average amount of insurance carried is far below the economic value of a human life. Life insurance companies have found that it is profitable to engage in health conservation work because such effort prevents or postpones deaths from many diseases. Certainly then, the organized public health agencies of the Federal, state and municipal governments, which have more at stake than have insurance organizations, will be justified in spending more money on properly directed effort in public health work.

The following table shows the amount of money disbursed in death claims on account of each of the more important causes of death:

Amounts Disbursed on Account of Deaths from Specified Diseases and Conditions.

Metropolitan Life Insurance Company, 1920.

Premium Paying Business—All Departments.

Disease or Condition	Amount	Percent of Total
All Causes of Death	$45,834,973*	100.0
Typhoid fever	425,854	.9
Influenza and pneumonia	8,255,040	18.0
Influenza	3,088,167	6.7
Pneumonia—all forms	5,166,873	11.3
Tuberculosis—all forms	6,555,927	14.3
Tuberculosis of the lungs	6,111,033	13.3
Cancer—all forms	3,645,297	8.0
Cerebral hemorrhage; apoplexy	2,675,470	5.8
Organic diseases of the heart	5,035,346	11.0
Bright's disease	3,218,314	7.0
Puerperal state	959,498	2.1
Total external causes	4,381,648	9.6
Suicides	537,777	1.2
Homicides	431,691	.9
Accidents	3,316,311	7.2
Accidental drowning	378,034	.8
Traumatism by falling	400,707	.9
Railroad accidents	397,911	.9
Automobile accidents	580,384	1.3
Other accidents	1,559,275	3.4
All other causes of death	10,682,579	23.3

* Total disbursed in death claims, $46,940,197. Above tabulation does not include death claims paid on "paid-up" or automatic term extension business.

UNUSUAL NUMBER OF SUICIDES AND HOMICIDES DURING JANUARY.

Has the less favorable industrial situation of the latter part of 1920 and the early part of this year resulted in increased numbers of suicides and homicides? There have been more of each recently in the wage-earning group of the population. The record in the Industrial Department of the Metropolitan Life Insurance Com-

pany for January shows a sharp increase in the death rate for these two causes.

Under normal conditions, we do not expect maximum suicide mortality at this time of the year. A larger number of suicides occur in May than in any other month. June is another month of high suicide mortality. January suicide rates are ordinarily low. Yet in the 1921 records of the Industrial Department of the Metropolitan, a suicide rate of 7.7 per 100,000 industrial policyholders was registered for January. This is higher than was shown for any month of 1920.

As for homicide, the January, 1921, rate was 7.2 per 100,000 and this was higher than that for any month of the year 1920 with the single exception of September. The figure for January, 1920, was 4.3, for November 5.1, and for December it was 6.8.

The relation of color to suicide and homicide is interesting. Suicide is a very minor cause of death, numerically, among colored persons. The situation is just the reverse with homicide among both colored males and females. The experience of years has shown that without exception the homicide rate for colored persons is many times greater than that for whites.

LOSS IN EXPECTATION OF LIFE ON ACCOUNT OF ORGANIC HEART DISEASES.

Heart disease causes a curtailment of two years in the life expectation of females and of one and two-third years among males. The loss is heavier among white persons than among colored. It is heaviest at about five years of age among both white males (1.95 years), and white females (2.27 years); at age 35 for both colored males (2.23), and colored females (2.60). Even at 75 years, the loss in expectation for each color and sex group is about one and a quarter years.

To this curtailment of the life-span must be added the losses in physical efficiency during the prolonged course of the average heart disease case. Medical supervision of cardiacs and more suitable employments for the afflicted would help to cut the loss in life expectancy. But it is more important to prevent the onset of serious heart affections by controlling the acute fevers and the chronic focal infections which so often lead to heart disease. There is evidence from hospital records that the very general practice of tonsillar operations of the last twenty years has at last reduced

the number of cases of acute febrile rheumatism, and in consequence, the rate of damage to the mitral valve. The accepted work of Billings and others on focal infections, such as those of the teeth, sinuses and various glands has probably influenced the death rate favorably. A reduction in myocardial affections may be expected because of the great fall in the number of cases of typhoid fever and, perhaps, because of the greater effectiveness of medical and nursing procedure in this disease during recent years.

The death rate from the common acute infectious diseases of children has not declined sufficiently, however, to influence the annual number of damaged hearts. One of the goals to be achieved in the administration of health work is the prevention of these infectious diseases in children. A study of the complications of these diseases in relation to age and sex incidence would perhaps suggest better methods of epidemic control and of case treatment. Diphtheria still remains with us as a prolific cause of heart disease, as are also measles, scarlet fever, pneumonia and influenza.

Better personal and industrial hygiene will have an influence in preventing heart impairments. The decreased consumption of alcoholic liquors, the reduction of venereal infections, the encouragement of wholesome sports and recreation, the adjustment of diet to actual bodily needs, and a proper attitude toward conditions of labor and the work day, will all tend to enhance bodily vigor and reduce heart and vascular damage.

The table on page 6 shows the facts of loss in life expectation on account of organic diseases of the heart:

Average Number of Years of After-Lifetime Lost on Account of Organic Diseases of the Heart.

Metropolitan Life Insurance Company—Industrial Department. 1911 to 1916.

Age	White		Colored	
	Male	Female	Male	Female
0	1.67	1.98	1.57	1.87
1	1.86	2.17	1.87	2.18
2	1.91	2.21	1.97	2.29
3	1.94	2.24	2.01	2.33
4	1.95	2.26	2.03	2.35
5	1.95	2.27	2.03	2.37
15	1.93	2.25	2.08	2.43
25	1.89	2.23	2.15	2.54
35	1.88	2.19	2.23	2.60
45	1.87	2.12	2.17	2.44
55	1.81	1.99	1.95	2.11
65	1.56	1.68	1.62	1.68
75	1.19	1.21	1.27	1.23
85	.96	.82	.99	.85
95	.41	.42	.33	.38

CANCER CONTROL.

Little, if any, improvement has been observed in the cancer death rate in the past ten years, although this decade has witnessed remarkable progress in the control of malaria, tuberculosis, typhoid fever and other conditions where preventive work has been rationally conceived and consistently carried out. In the entire Industrial Department of this Company the cancer death rate has not varied much from 69 per 100,000 since 1911.

The one encouraging fact in the cancer mortality data of the Industrial Department during the decade is the slight downward trend of the rate for white females. There has been a gradually increasing death rate from cancer among colored females and colored males. The rate for white males has been practically stationary. It may be true that the efforts of the cancer control campaign have been successful in bringing more of the accessible and more readily recognized early cancers of white females to the attention of the surgeon, and that many deaths from these conditions

have been postponed. This is the first suggestion we have had in our figures that the moderately developed anti-cancer movement has begun to influence death rates.

Health officials and executives of private organizations would do well to inaugurate local educational activities for cancer control. In Cincinnati, recently, an organization known as the Divisional Council on Cancer Control was effected. This group is under the joint auspices of the City Health Department, the Academy of Medicine, and the Public Health Federation. The work is to be managed by a Committee of Fifteen, carefully selected from the several religious, nursing, medical and health educational groups in the city. It is planned to carry on an intensive system of lectures among women's and mothers' clubs and other organized groups who may desire to be informed on the subject. There is also to be an arrangement with the local newspapers for bringing the facts of cancer control to the attention of the public. Denver recently held a series of popular meetings on cancer control. Bringing the message of cancer relief to the attention of the public through local educational effort, can be furthered by health agencies, especially since the American Society for the Control of Cancer now has local representatives in nearly all States who are prepared to co-operate in developing such campaigns.

OCCUPATION HAZARDS AND DIAGNOSTIC SIGNS.

A booklet has been prepared by this Company containing a list of the principal health hazards in industry. These hazards are shown under four heads: dust, heat, humidity and poisons. Details for twenty-four of the commoner poisons are shown. Each statement of a hazard is accompanied by a list of the signs and symptoms of the diseases induced by the action of these injurious substances and conditions. The industries and occupations in which these hazards arise are also shown. As a guide to the use of the manual, a detailed alphabetical list of the principal occupations involving processes injurious to health is given, with a key to the list of hazards. The information in the booklet is accessible, therefore, from the standpoint of both the hazard and of the occupation. The manual was based upon the list of industrial hazards prepared in 1910 by Sommerfeld and Fischer, but has been greatly augmented by inclusion of the observations of other industrial hygienists published since that date. The works of Doctors Hamilton, Hayhurst, Edsall, Thompson, Kober, Hanson and others have been consulted in the preparation of the booklet.

It has been suggested, however, that still further improvement of the list is possible because of the rapidly widening scope of the field of industrial hygiene, the increasing number of workers in the field and the intensive research which has been undertaken by industrial physicians and hygienists since the pioneer publications were issued. It is the Company's purpose to make the manual as serviceable as possible to the field of industrial medicine and hygiene, and so it is proposed to submit the booklet to American physicians and hygienists in industry for criticism. Suggestions are invited as to additional hazards not noted in the manual; their signs and symptoms, and the particular processes or trades affected. Such suggestions will be used in a revision of the booklet, which it is planned to make available to all doing work in the field of industrial hygiene.

Copies of the booklet may be obtained from the Statistical Bureau of the Company.

STATISTICS OF SYPHILIS AND THIRD REVISION OF THE INTERNATIONAL LIST OF CAUSES OF DEATH.

The third Conference for the Revision of the International List of Causes of Death held in Paris during October, 1920, decided that for the ensuing decade reports of deaths caused by complications or later stages of localized syphilis should be classified under titles for diseases of the various organs in which the syphilitic lesion is manifest. If American registration offices decide to adhere strictly to the requirements of the revised list, it will be necessary to classify under "diseases of the brain" every report of cerebral syphilis; under "cirrhosis of the liver" every report of syphilitic cirrhosis; and under "diseases of the respiratory system" fatal cases of syphilitic infection of the trachea, bronchi, or lungs.

For many years, all syphilis whether localized or not has been classified as syphilis. Under the new practice, it will not be possible to ascertain the total number of deaths reported as due to this disease unless registrars show separately for each of these scattered titles in the International List the number of syphilis deaths included. This scattering of syphilis entries over many titles of the International List will involve much labor for the registrar and for the person consulting the reports for material comparable with the statistics of total syphilis mortality in past years.

The decision of the International Conference on this point was made over the earnest protest of the American delegation, who

had the support of the delegates of several other countries. If the Manual of the International List, based upon this third revision, is to be used by American registrars strictly in accordance with the practice prescribed therein, the total mortality from syphilis can be determined only if suitable sub-groups are arranged for the several titles receiving these new entries. It is much to be hoped that health officers and registrars will keep this requirement in mind and make possible a complete count of all the deaths due to syphilis that are reported to them.

HEALTH RECORD FOR JANUARY, 1921.

The first month of 1921 registered an extremely low death rate, namely, 9.2 per 1,000. Not only does this mark a decline from the exceedingly low December rate, but it is 9 per cent. below that for the corresponding month of 1920 which, up to that time, was the minimum recorded for the first month of the year.

The very low tuberculosis rate continues to be the chief feature. The figure (116.5 per 100,000) is one of the lowest on record. In January, 1920, it was 141.5, and the latter figure was considered to be a low one according to past standards. Declines were also recorded in January for cancer, Bright's disease and diphtheria. All through the year 1920 there was high mortality from the last named disease. It is to be hoped that the drop of about 18 per cent. registered for January, marks the turning point in the extremely unfavorable condition that has prevailed for so long with respect to diphtheria. The pneumonia rate increased appreciably, but this is to be expected at this time of the year.

Influenza was recorded as the cause of 115 deaths with a death rate of 10.2. This is below the normal at this season. Organic heart disease has been showing a continuously upward trend since September. The situation with reference to diseases and conditions incidental to pregnancy and child-birth is unchanged. The rate is still far too high for a class of diseases which are, for the most part, preventable.

We have directed attention on another page to the increased mortality from suicides and homicides during January. There were 88 deaths in automobile accidents, which is high for this time of the year. This is a bad indication and points to continued high mortality in coming months.

In January the death rate for the general population in the large cities of the country rose 1.2 points over the December figure of 12.4. It was much lower, however, than the rate for January, 1920, which was 15.8.

In spite of the low death rate there are many health situations which require attention. Smallpox is still prevalent in many places. Epidemics were reported in Oak Park, East Chicago, and in the Illinois counties of Allen, Delaware and Pike. The disease has been increasing rapidly in Minnesota and gradually in Montana. There have been many cases in Louisiana, Iowa and Nebraska. More than 200 cases were reported in West Virginia. Reports of its prevalence come also from Port Arthur, Texas, Ottawa (Canada), and Bloomington and Dodson, Maryland. Smallpox caused the quarantine of a boat on the Monongahela River at Monessen, Pennsylvania. Scarlet fever appears to be spreading in Pennsylvania and in the Great Lakes district. During the last week of the month there was an increase of 60 cases in Philadelphia, and in Millwood, Pennsylvania, an epidemic caused the closing of the schools. In Minneapolis 273 cases were reported for the week ended January 22, and there were 307 cases scattered throughout the city. The disease has appeared in Connecticut to a considerable extent.

Practically every day witnesses the reporting of "sleeping sickness" from some part of the country. In Cleveland there were nine deaths in January, as compared with fourteen during the entire year 1920. Cases have also been reported from Boston, Lowell and Waltham, Mass., and several have occurred in Chicago and other Illinois cities. In New York City there were 66 cases reported during January, 31 of which occurred during the last week. Up to February 17, 188 cases and 49 deaths had been reported in the five boroughs.

Much attention has been focused on the typhus fever situation. Three cases were reported from Waco, Texas. In New York City, proper, seven authentic cases and one death had been reported up to February 17. These have been traceable, for the most part, to infection from immigrants. The New York City Health Department has inaugurated vigorous action in the inspection of immigrants for the detection of typhus fever and this has excluded many more cases that were brought in on ocean liners.

The following table displays the mortality data for December, 1920; January, 1921, and for the year 1920:

METROPOLITAN LIFE INSURANCE COMPANY

Death Rates per 100,000 for Principal Causes, Premium-paying Business in Industrial Department.

MONTHS OF DECEMBER, 1920 AND JANUARY, 1921.

CAUSE OF DEATH	RATE PER 100,000 LIVES EXPOSED		
	JAN., 1921	DEC., 1920	YEAR 1920
TOTAL—ALL CAUSES	919.8	940.1	968.4
Typhoid fever	3.7	5.0	6.5
Measles	3.0	3.4	8.3
Scarlet fever	10.2	8.7	5.9
Whooping cough	3.8	4.3	6.5
Diphtheria	28.4	34.8	21.6
Influenza	10.2	8.5	52.3
Tuberculosis (all forms)	116.5	124.1	135.0
Cancer	66.6	76.1	68.3
Meningitis (all forms)	5.3	4.5	5.1
Cerebral hemorrhage	64.1	65.4	60.1
Organic diseases of heart	127.7	121.0	114.6
Pneumonia (all forms)	106.0	85.9	103.9
Other respiratory diseases	18.5	17.1	17.8
Diarrhea and enteritis	8.8	9.6	15.5
Bright's disease	68.9	74.6	69.4
Puerperal state	17.5	17.6	22.5
Suicides	7.7	5.6	6.0
Homicides	7.2	6.8	5.7
Other external causes (excluding suicides and homicides)	50.7	57.5	58.1
Traumatism by automobile	7.8	10.2	10.9
All other causes	194.9	209.5	185.3

Correspondence on the subjects discussed in these BULLETINS may be addressed to the Editor:

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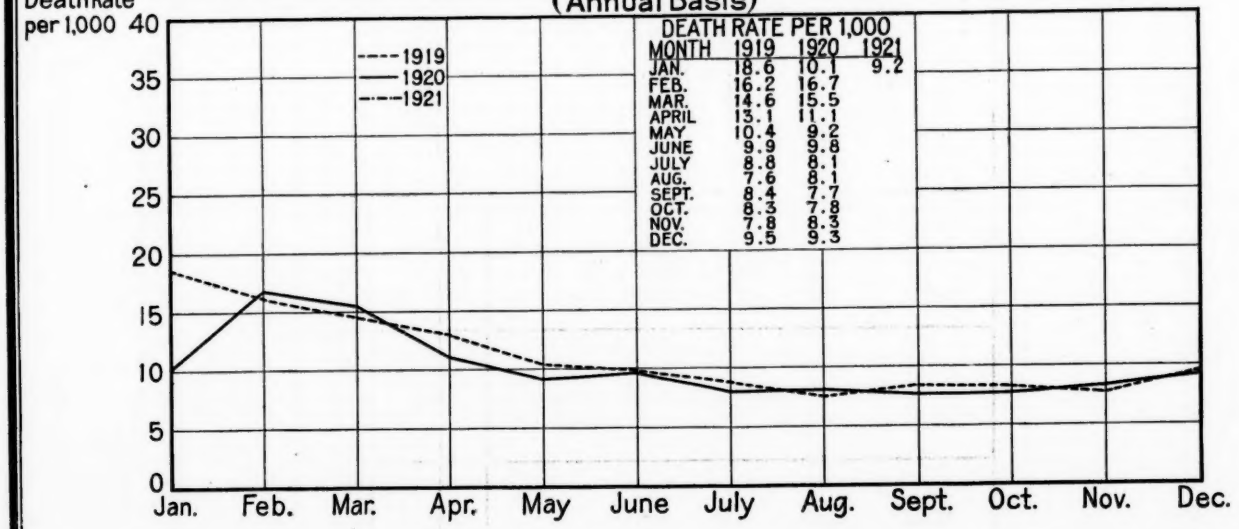
Metropolitan Life Insurance Co.

INDUSTRIAL DEPARTMENT

DEATH RATE PER 1,000 in specified months of 1919, 1920, 1921

(Annual Basis)



DEATH RATE PER 1,000

MONTH	1919	1920	1921
JAN.	18.6	10.1	9.2
FEB.	16.2	16.7	
MAR.	14.6	15.5	
APRIL	13.1	11.1	
MAY	10.4	9.2	
JUNE	9.9	9.8	
JULY	8.8	8.1	
AUG.	7.6	8.1	
SEPT.	8.4	7.7	
OCT.	8.3	7.8	
NOV.	7.8	8.3	
DEC.	9.5	9.3	

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